

## MULTIPLEXER STRUCTURE WITH INTERDIGITATED GATES AND DIFFUSION SHARING

### ABSTRACT OF THE DISCLOSURE

A multiplexer structure includes a semiconductor substrate having a shared diffusion region. A first gate having a first finger and a second finger is disposed on the shared diffusion region, and a second gate having a first finger and a second finger is disposed on the shared diffusion region. A contact for a first input node is disposed on the shared diffusion region between the first and second fingers of the first gate, and a contact for a second input node is disposed on the shared diffusion region between the first and second fingers of the second gate. A contact for a collector node is disposed on the shared diffusion region between the first and second gates. In operation, closing the first gate electrically connects the first input node and the collector node, and closing the second gate electrically connects the second input node and the collector node.